

A roadmap for Boot.dev's CS curriculum for backend developers

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wagslane ...

on Nov 22 ⌚

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Boot.dev's Computer Science Curriculum for Backend Developers

☰ README.md

This is a living roadmap for [Boot.dev's free-to-audit computer science program for backend developers](#).

The Roadmap of Courses and Projects

1. Learn programming and CS basics

- [Learn Python \(Python\)](#)
- [Learn Object-Oriented Programming \(Python\)](#)
- [Build a Local Dev Environment \(Python, Git, VS Code\)](#)
- [Learn Algorithms \(Python\)](#)
- [Learn Data Structures \(Python\)](#)
- [Build a Maze Solver \(Python\)](#)
- [Personal Project 1 \(Your choice\)](#)

2. Learn web basics

- [Learn JavaScript \(JavaScript\)](#)
- [Learn HTTP \(JavaScript\)](#)
- [Build an SEO Link Analyzer \(JavaScript, Node.js\)](#)
- [Learn Functional Programming \(JavaScript, PureScript\)](#)
- [Personal Project 2 \(Your choice\)](#)

3. Learn backend web development

- [Learn Go \(Go\)](#)
- [Learn Computer Networking \(Go\)](#)
- [Build a Social Media Backend \(Go Project\)](#)
- [Learn SQL \(SQL\)](#)
- [Learn Cryptography \(Go\)](#)
- [Enhance your Social Media Backend \(SQL, Go\)](#)
- [Learn Distributed Systems \(Go\)](#)
- [Learn NoSQL Databases \(???\)](#)
- [Learn Performance Engineering \(Go\)](#)
- [Personal Project 3 \(Your choice\)](#)

4. Learn DevOps

- [Learn Docker \(Docker CLI\)](#)
- [Learn Kubernetes \(Kubernetes\)](#)
- [Learn CI/CD \(GitHub Actions\)](#)
- [Learn Infrastructure as Code \(Terraform\)](#)
- [Deploy your Social Media Backend](#)
- [Learn Logging and Telemetry \(Go\)](#)

5. Learn advanced computer science

- [Learn Advanced Algorithms \(Python\)](#)
- [Learn Clean Code \(Go\)](#)
- [Learn Computer Architecture and Hardware \(ARM\)](#)
- [Learn Discrete Math for Programmers \(Go\)](#)
- [Learn Operating Systems \(???\)](#)

6. Final capstone project

- [Capstone Project \(Your choice\)](#)

7. Continued learning

- [Learn Graphics in HTML5 Canvas \(JavaScript\)](#)
- [Learn Compilers \(Go\)](#)
- [Learn Computational Theory \(???\)](#)

- Learn Artificial Intelligence (Python)
- Learn Machine Learning (Python)



Features and goals

Hands-on, project based

We believe in [learning by building](#). We mix guided and unguided content. Every *guided course* is a collection of coding assignments and quizzes designed to teach a set of concepts. Every *unguided project* is a blueprint for students to build an entire application on their local machines.

Linear curriculum

The majority of students should have a *simple and straight* path to completion, without needing to make many choices about which courses to take next.

Modern tech stack

The tech stack should be *fairly* lean. The goal of Boot.dev is to teach the *concepts* of CS without *forcing* students to learn too many languages, frameworks and tools. For this reason, the primary languages of Boot.dev are currently:

- Python
- JavaScript
- Go

Should I get started even though the program is not "complete"?

Yes you should get started - this program will always be improving and never be "complete". This curriculum will never be "complete" in the same sense the YouTube will never be "complete" - there is new content all the time. We care deeply about the quality of this program and will always be improving and adding to it.



Contribute

We love help and feedback on how we can improve the curriculum! The recommended way to help is to submit issues here on Github. If you just want to talk about some ideas, use the discussions tab or contact us directly using one of the methods below.



Contact

If you would like to discuss the project feel free to [contact us at Boot.dev](#). We're most responsive on Discord, but you can also find us on Twitter.

- [Twitter](#)
- [Discord](#)

No releases published

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